

REMARKS

In the Office Action mailed June 27, 2003:

Claims 32 and 34 were objected to as being duplicates of Claims 16 and 18.

Claims 28-31 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter not present in the specification at the time the application was filed.

Figures 2A-2C were similarly objected to as containing features not present in the original disclosure.

Claims 14, 15, 19, 20, 22, 23, 27, and 28 were rejected under 35 U.S.C. 102(b) as being anticipated by Muller et al. (5,285,131).

Claims 14, 15, 19-23 and 26-28 were rejected under 35 U.S.C. 102(e) as being anticipated by Orloff et al. (US 2002/0160520).

Claims 24 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Orloff et al. (US 2002/0160520) in view of Smart et al. (5,801,057).

Claim 32 has been amended to provide differentiation over Claim 16. As a result, dependent Claim 34 also differentiates over claims 18.

New claims 35-41 have been added.

With respect to the rejection of claims 28-31 as directed to new matter and the objection to Figs. 2A-2C for the same reasons, applicants wish to point out that the present application incorporates by reference U.S. Patent 5,801,087 at page 6. A copy of the '087 patent is attached for the Examiner's convenience. As will be apparent, Figs. 2A and 2B of the '087 patent are similar to Figs. 2A and 2B of the present application as submitted in October 2001. Nevertheless, in the present amendment applicants have substituted Figs. 1, 2A and 2B of the '087 patent for Figs. 2A-2C and have inserted into the present application text from Col. 4, lines 36-46 and Col. 4, line 62 to Col. 5, line 16 of the '087 patent. Since the '087 patent is incorporated by reference in the present application, there should be no issue of new matter.

With the respect to the rejection of several of the claims as anticipated by Orloff et al. US 2002/0160520 or obvious over a combination of Orloff et al. with another reference, applicants wish to note that Eugene Orloff and his named co-inventor, Kumar Subramanian, were employees of Kumetrix, Inc., the assignee of the present application, prior to their employment at Phoenix Bioscience, the assignee of the Orloff et al. reference. In addition, Mr. Subramanian is a co-inventor of the present application.

A Declaration is enclosed that was made on December 7, 2002 by Wilson Smart, the President of Kumetrix and one of the inventors of the present application. This Declaration was submitted to the Patent and Trademark Office Assignment Branch on December 9, 2002 in support of efforts to register an assignment of several patent applications including the present application. Paragraph 3C sets forth dates in 1997 for the conception and fabrication of the present invention. Paragraphs 3A, B and D refer to other work performed at Kumetrix by the Declarant and Messrs. Orloff and Subramanian. Inasmuch as Mr. Subramanian is named as an inventor on both the Orloff et al. reference and the present application, it is believed that a case of derivation is made out with request to whatever teaching of Orloff et al is applied against the claims of the present application. If more information is needed, the Examiner is invited to contact applicants' attorney at (650) 849-7777.

In view of the foregoing it is submitted that the rejection of the claims on the basis of Orloff et al should be withdrawn.

With respect to the rejection on Muller et al., Muller et al. teaches a chamber etched in a silicon substrate which is sealed by a double layer of transparent silicon nitride film forming an exterior window over the top of the cavity. The silicon nitride film is deposited on the upper surface of the substrate, and is raised and free standing over the cavity. It is thus fully exposed, creating the possibility of damage during use. Further, because the chamber is hermetically sealed by the film, there is no mechanism for filling or emptying the chamber, as is possible with the present application. The interior of the film is not accessible.

Applicants claim a silicon nitride window which forms the bottom of the chamber of a microsampling device. The window is recessed from both the top and bottom surfaces of the silicon substrate, and both sides of the window are accessible. The claims have been amended to clarify this.

The present invention provides several advantages over prior art. The depth of the cuvette, and therefore optical path length can be accurately set, while retaining the full wafer thickness for handling. The nitride film window is protected during use because it is not flush with the wafer surface. This provides a significant increase in durability, especially if an antireflective coating is used to permit accurate optical measurements.

In view of the amendments to claims 14 and 19, it is believed that these claims and claims 15, 39, 40 and 20-31 which are dependent thereon are patentable over Muller et al.

Claims 16-18 have been indicated to be allowable. Claim 16 has been amended to clarify an antecedent.

Newly added dependent claims 35-38 are believed patentable because method claim 16 has been indicated to be allowable and method claim 32 is similar to claim 16.

Claim 41 is similar to Claim 16 but recites that the silicon nitride film is deposited in at least the depression.

In view of the foregoing, applicants believe that all of the claims are now in condition for allowance and respectfully request the Examiner to pass the subject application to issue. If for any reason the Examiner believes any of the claims are not in condition for allowance, he is encouraged to phone the undersigned at (650) 849-7777 so that any remaining issues may be resolved.

Aside from the fees for an extension of time and for additional claims. No additional fee is believed due for filing this response. However, if a fee is due, please charge such fee to Pennie & Edmonds LLP's Deposit Account No. 16-1150.

Respectfully submitted,

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Brett Lovejoy

Francis E. Morris (Reg. No. 24,615)

PENNIE & EDMONDS LLP

3300 Hillview Avenue

Palo Alto, CA 94304-1203

650-849-7777

42,813

(Reg. No.)